CABLE DATA for SVT

General Information

Cable standard(s)

- БДС 16291-85.

Construction Product Regulation (CPR) Classification

- Regulation: Compliant with the EU Regulation (EU) No. 305/2011 on construction products.
- Intended Use: Suitable for general applications in construction works with fire safety requirements.
- Harmonized Standard: EN 50575:2014.
- Reaction to Fire Classification: Eca (according to EN 13501-6).
- Release of Dangerous Substances: N.P.D. (No Performance Determined).

Flame Retardant Properties

- The cable complies with the self–extinguishing requirements specified in БДС IEC 60332-1 (single vertical wire flame test).

Temperature Ratings

- Minimum installation and handling temperature: -5°C
- Maximum continuous conductor operating temperature: +70°C
- Maximum conductor temperature during short-circuit (≤ 5 seconds): +160°C
- Permissible ambient temperature range during operation: –30°C to +50°C

Minimum Bending Radius *(D = external diameter of the cable)*

- 12 × D

Application of the cable:

- The SVT-s is power cable designed for the **transmission and distribution of electrical energy** in fixed installations. It serves as a fundamental component in electrical networks and wiring systems, offering a balance of performance and durability for stationary applications.
- **Universal Installation Capabilities:** This cable is engineered for exceptional versatility in laying conditions. It is suitable for fixed installation **indoors, in cable ducts, tunnels, and shafts**. Its construction allows for secure placement in complex infrastructure environments.
- **Outdoor and UV Resilience:** Specifically manufactured to meet the requirements for **UV and weather resistance**, the SVT-s excels in outdoor settings. The outer sheath protects against solar radiation and harsh atmospheric conditions, preventing premature aging when installed in the open air.
- **Direct Underground Application:** The cable is robust enough for placement in **excavations and earth trenches**. It is designed to withstand the conditions of direct burial, ensuring continuity of power supply in underground distribution grids.

Cable Construction and Electrical Properties

Conductor:

- Copper conductor, Class 1 (solid)/round (RE) or Class 2 (stranded)/round (RM), in accordance with БДС 904-84, БДС IEC 60228

Insulation:

- PVC insulation compound TI1, according to БДС EN 50363.
- Wire cores concentrically stranded, with or without a yellow-green protective conductor.
- Insulation color coding according to HD 308 S2.

Filler:

- No filler.

Sheath:

- PVC outer sheath, compound typeTM1, according to БДС EN 50363.
- Sheath color: Black.

Rated Voltage:

- Uo/U = 0,6/1 kV

Test Voltage:

- 4 kV AC

Ampacity chart

Cross section [mm²]	Insulated tubes, thermally insulated wall		Insulated tubes, on a wall		Open air against wall		Open air, mininimum 1×D space from wall	
								
1,5	15,5	13,0	16,5	15,0	19,5	17,5	22,0	18,5
2,5	18,5	17,5	23,0	20,0	27,0	24,0	30,0	25,0
4	25,0	23,0	30,0	27,0	36,0	32,0	40,0	34,0
6	32,0	29,0	38,0	37,0	46,0	41,0	51,0	43,0
10	43,0	39,0	52,0	46,0	63,0	57,0	70,0	60,0
16	57,0	52,0	69,0	62,0	85,0	76,0	94,0	80,0
25	75,0	68,0	90,0	80,0	112,0	96,0	119,0	101,0
35	92,0	83,0	111,0	99,0	138,0	119,0	148,0	126,0

- These charts are extracted from „Технически Справочник - Cable manufactured by БДС 16291-85“ in abbreviated form and relate to cables for fixed wiring in buildings based on 30°C operating temperature. The figures shown are to be considered as guiding values only.
- For higher ambient temperatures, apply derating factors.

Dimensional Specifications

№	Construction [n×mm²]	Metal index [kg/km]	Weight (approx.) [kg/km]	Diameter (range) [mm]	Resistance at 20°C [Ω/km]
1	2×1,5 RE	28,8	190	6,2–7,5	12,1
2	2×2,5 RE	48,0	230	7,0–8,5	7,41
3	2×4 RE	76,8	310	8,0–9,8	4,61
4	2×6 RE	115,2	380	9,5–11,5	3,08
5	2×10 RE	192,0	510	11,0–13,5	1,83
6	2×16 RM	307,2	705	13,0–15,5	1,15
7	2×25 RM	480,0	1010	15,0–17,5	0,727
8	2×35 RM	672,0	1285	17,5–20,0	0,524
9	3×1,5 RE	43,2	190	7,0–8,5	12,1
10	3×2,5 RE	72,0	240	8,0–9,8	7,41
11	3×4 RE	115,2	330	9,5–11,5	4,61
12	3×6 RE	172,8	420	11,0–13,0	3,08
13	3×10 RE	288,0	580	12,5–14,5	1,83
14	3×16 RM	460,8	810	14,5–16,5	1,15
15	3×25 RM	720,0	1300	16,5–19,0	0,727
16	3×35 SM	1008,0	1400	18,5–21,0	0,524
17	3×25+16 RM/RM	873,6	1500	17,5–19,5	0,727/1,15
18	3×35+16 SM/RM	1161,6	1700	19,5–21,5	0,524/1,15
19	3×50+25 SM/RM	1680,0	2300	21,5–24,5	0,387/0,727
20	3×70+35 SM/RM	2352,0	2800	24,0–27,5	0,268/0,524
21	3×95+50 SM/RM	3216,0	3800	27,0–30,5	0,193/0,387
22	3×120+70 SM/RM	4128,0	4700	30,0–33,5	0,153/0,268
23	3×150+70 SM/RM	4992,0	5600	33,0–36,5	0,124/0,268
24	3×185+95 SM/RM	6240,0	7400	36,0–39,5	0,0991/0,193
25	3×240 +120 SM/RM	8064,0	9600	39,0–43,5	0,0754/0,153
26	4×1,5 RE	57,6	220	7,5–8,8	12,1
27	4×2,5 RE	96,0	290	8,5–10,0	7,41
28	4×4 RE	153,6	400	10,0–11,8	4,61
29	4×6 RE	230,4	510	11,5–13,5	3,08
30	4×10 RE	384,0	720	13,0–15,5	1,83
31	4×16 RM	614,4	1050	15,0–17,5	1,15
32	4×25 RM	960,0	1600	17,0–19,5	0,727
33	4×35 SM	1344,0	1750	19,0–21,5	0,524
34	4×50 SM	1920,0	2300	21,0–23,5	0,387
35	4×70 SM	2688,0	3100	23,5–26,5	0,268
36	4×95 SM	3648,0	4200	26,5–29,5	0,193
37	4×120 SM	4608,0	5200	29,5–32,5	0,153
38	5×1,5 RE	72,0	270	8,0–9,2	12,1
39	5×2,5 RE	120,0	350	9,0–10,5	7,41
40	5×4 RE	192,0	480	10,5–12,0	4,61
41	5×6 RE	288,0	610	12,0–13,8	3,08
42	5×10 RE	480,0	880	13,5–15,5	1,83
43	5×16 RM	768,0	1250	15,5–17,5	1,15
44	5×25 RM	1200,0	1950	17,5–19,5	0,727